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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,948	10/22/2001	Kevin W. Baugh	85700-0051	8213

24633 7590 07/07/2003
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EXAMINER

SWARTHOUT, BRENT

ART UNIT	PAPER NUMBER
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2636

DATE MAILED: 07/07/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,948

Applicant(s)

Baugh et al.

Examiner

Brent A Swarthout

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4-23-03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13, 23-27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogrodnik in view of Gray et al. (980).

Ogrodnik discloses a system for tracking airborne objects comprising a receiver subsystem which receives a reference signal from an uncontrolled transmission, such as a television broadcast, receiving scattered signals reflected from flying craft which originated with the television broadcast signal, first processing to find object velocity, and second processing to determine object position so as to track the object for air traffic control purposes (see pages 369-375). Initial target position is derived from signals communicated at the same time reference signals are received.

The first and second processing disclosed by Ogrodnik is functionally equivalent to front-end and back-end processing as

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set forth in the claims, since the updated position data shown on Fig. 2 corresponding to update object state data would have been based on speed of object, in order that correct updated position could have been displayed.

Gray teaches desirability in a system of detecting reflected signals from a target of processing digitized transmission replicas of received transmission to determine object state (col. 8, lines 27-35; 41-46).

It would have been obvious to one of ordinary skill in the art to utilize digitized replicas of received signals, in order to obtain more accurate target data.

Regarding claim 6, Ogrodnik teaches use of phased antenna array to get frequency difference of arrival by sensing time delays or angle of arrival differences (pgs. 372-373).

2. Claims 14-22, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogrodnik in view of Gray et al. (980) and Strayer.

Ogrodnik and Gray teach use of a uncontrolled transmission and scattered transmission object tracking system, except for describing what an air traffic controller would do with the output.

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Strayer discloses desirability of using aircraft position data with respect to the aircraft or ground locations, in order to provide alerts to a controller and pilot if aircraft track will intersect with other aircraft, or when an aircraft is too close to another aircraft.

It would have been obvious to utilize output measures as implemented by Strayer in conjunction with an object tracking system as disclosed by Ogrodnik and Gray, in order to be able to warn a pilot of unsafe conditions to allow for quicker response time.

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the

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statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent Swarthout whose telephone number is (703) 305-4383. The examiner can normally be reached on M-F from 6:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu, can be reached on (703) 308-6730. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



BS/ayc

June 17, 2003

BRENT A. SWARTHOUT
PRIMARY EXAMINER